Pantelis Michalopoulos
202 429 6494
pmichalopoulos@steptoe.com

1330 Connecticut Avenue, NW
Washington, DC 20036-1795
202 429 3000 main
www.steptoe.com

Steptoe

February 23, 2021

BY ELECTRONIC FILING

Marlene Dortch
Secretary
Federal Communications Commission
45 L Street, NE
Washington, DC 20554

Re: **Request for Protective Order:** Expanding Flexible Use of the 12.2-12.7 GHz Band, WT Docket No. 20-443; IBFS File No. SAT-MOD20200417-00037; WC Docket No. 09-197, Telecommunications Carriers Eligible to Receive Universal Support

Dear Ms. Dortch:

DISH Network Corporation ("DISH") has previously expressed its appreciation for the Commission's issuance of a rulemaking to consider the future of the 12.2-12.7 GHz band ("the 12 GHz band"),[1] which will allow a full airing of issues relating to the sharing of the 12 GHz band among a number of satellite and terrestrial licensees and technologies, including 5G terrestrial services. Many of these issues are intensely factual and technical. In particular, the question of the extent to which non-geostationary Fixed-Satellite Service ("NGSO FSS") systems can co-exist with 5G and Direct Broadcast Satellite ("DBS") services turns on information that is in the possession of the NGSO licensees themselves. To illuminate these questions, it would be beneficial, and indeed necessary, for the Commission to propound certain additional questions to the NGSO system proponents, and DISH requests that the Commission do so.

Because some of the answers to such questions are likely to involve competitively sensitive and proprietary information, DISH also respectfully requests that the Commission issue a protective order allowing for the submission of confidential information into the record of this proceeding, and for the protection of highly confidential information by restricting its availability to outside counsel and experts. The Commission has done so before when a rulemaking implicates information of that nature,[2] and should do so again here.

---

[1] Expanding Flexible Use of the 12.2-12.7 GHz Band, *Notice of Proposed Rulemaking*, WT Docket No. 20-443 (Jan. 15, 2021).

[2] For example, the Commission promulgated a protective order in the C-Band proceeding to facilitate receipt of both confidential and highly confidential information. *See* Expanding

Below is a list of questions and information requests that DISH believes the Commission would find highly probative to the issues teed up for evaluation in the 12 GHz rulemaking. In an effort to reduce the expenditure of Commission resources, DISH has requested that information from one NGSO proponent, Space Exploration Technologies Corp., ("SpaceX"). Rather than responding to DISH, however, SpaceX used DISH's good faith request to complain to the Commission, on the ground that the information is "highly sensitive" and "proprietary."[3] This claim disregards the confidentiality protection that DISH had readily offered to SpaceX. The proposed protective order would lay to rest SpaceX's concerns in that regard. As for SpaceX's other arguments, DISH does not object to providing appropriate information about its DBS operations under a protective order. SpaceX also faults DISH for not providing "any information about" "whether existing EPFD protections may be overly restrictive of NGSO operations."[4] But this argument unwittingly highlights the need for information *from* SpaceX. It is only SpaceX that has, and can provide, that information about its own operations. In the end, SpaceX never claims that the information requested by DISH would be irrelevant or unhelpful to the Commission in its 12 GHz rulemaking and review of SpaceX's proposed modification.

1. Provide up-to-date information regarding the equivalent power flux density ("EPFD") of each NGSO FSS system, including EPFD data files, and any studies and engineering analysis demonstrating that power levels will not exceed what a standard DBS reference antenna can tolerate.

2. Provide updated Ku-band power flux density masks for each satellite in the NGSO FSS system.

3. Provide up-to-date data files containing the orbital parameters and other information concerning the NGSO FSS system, as necessary to run EPFD validation software, and any other information sufficient to calculate a single-entry EPFD value.

4. State the assumptions and methodology (for example, the ITU standard, software used, or worst-case geometry) used to calculate EPFD downlink values, along with the results including any graphical output files.

5. What is each NGSO FSS system proponent's proposed maximum number of satellites transmitting with overlapping frequencies to a given location? Provide any engineering analysis, including capacity and data rates that can be supported for multiple users in the same area, and supporting documentation for this number. Similarly, what is the

---

Flexible Use of the 3.7 to 4.2 GHz Band, *Protective Order*, 34 FCC Rcd 7700, GN Docket No. 18-122 (Aug. 26, 2019).

[3] *See* Letter from David Goldman, SpaceX, to Marlene Dortch, FCC, IBFS File No. SAT-MOD20200417-00037 at 2 (Feb. 22, 2021).

[4] *Id.*

maximum number of user terminals located in any spot on earth that can transmit to different satellites simultaneously by co-frequency?

6. How does each NGSO FSS system proponent plan to overcome technical and operational challenges to prevent co-frequency satellite beams from overlapping during in-line events with other NGSO systems? For example, how does each NGSO FSS system proponent intend to avoid unintentional co-frequency overlap, or to what extent would any proposed solutions such as spectrum splitting impair its proposed service to such a degree as to make the offering less economically viable?

7. How does each NGSO FSS system proponent plan to comply with applicable domestic and international EPFD limits to safeguard DBS subscribers from harmful interference?

8. In each case, in addition to providing updated information, answer these questions and provide responsive information with respect to the initial system proposed to the Commission, each system modification, and the system as proposed to be modified.

9. What average and peak downlink and uplink usage has each NGSO FSS system experienced in any beta service, both for each individual subscriber and on average for the system? Has each NGSO FSS system used, or plan to use, the 12 GHz band for any beta service? If so, provide average and peak usage information for that band. What is the usage ratio for each 500 MHz increment in the 10.7-12.7 GHz band in each NGSO FSS system's beta service?

10. How many gateways does each NGSO FSS system's beta service use? Where are they located? What is the average and peak usage, in the aggregate for the system, of Ka-band gateway downlinks and uplinks in such beta service? What has been the ratio of average and peak aggregate system usage for user downlinks and gateway downlinks?

11. In what countries other than the United States does each NGSO FSS system proponent have a license to provide service or "landing rights"? List the frequency bands on which each NGSO FSS system proponent is authorized to provide service in each of these countries. Does each NGSO FSS system proponent have the right to use the 12 GHz band for satellite downlink to user terminal downlinks in each of these countries?

Finally, the Commission should also make available under the same protective order the portion of SpaceX's long-form application for the Rural Digital Opportunity Fund ("RDOF") relating to the 12 GHz band, including any plans of SpaceX to rely on the band in fulfilling its obligations.[5]

[5] *See* Partial Opposition of DISH Network Corporation, Petition of Starlink Services LLC for Designation as an Eligible Telecommunications Carrier, WC Docket No. 09-197 (Feb. 22, 2021).

DISH looks forward to working with the Commission as it evaluates the best use of the 12 GHz band to further close the digital divide and advance the United States' position in the race to 5G.

Respectfully submitted,

/s
Pantelis Michalopoulos
Counsel to DISH Network Corporation

cc:
William Wiltshire
David Goldman